

associating said plurality of virtual containers with each other by means of assigning association data describing said association into said plurality of virtual containers;

Q' indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers;

inputting said transported data into said payloads of said plurality of virtual containers; and

outputting said plurality of associated virtual containers onto a synchronous digital network.

13. (Amended) Apparatus for incorporating data input at a first data rate into a plurality of streams of synchronous digital hierarchy virtual containers each output at a second data rate, said apparatus comprising:

BW means for continuously generating a plurality of virtual containers in parallel; means for generating data describing an association of said plurality of virtual containers, and for assigning said association data to said plurality of associated virtual containers; and

means for inserting said first data rate data into said plurality of payloads of said plurality of virtual containers,

Q2 wherein said data describing said association includes data indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers.

14. (Amended) A method of recovering data from a plurality of synchronous virtual containers, said method comprising the steps of:

Q receiving said plurality of virtual containers; identifying an association data from said plurality of virtual containers, said association data indicating an association between individual ones of said plurality of virtual containers;

reading data bytes from each payload of said plurality of associated virtual containers; and

re-assembling said data from said plurality of read payload data bytes,

Q² B² wherein said association data includes data indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers.

22. (Amended) A method of recovering data carried in payloads of a plurality of associated synchronous digital hierarchy virtual containers, said method comprising the steps of:

for each said virtual container:

Q³ B³ reading data indicating an association between said virtual container and other ones of said plurality of virtual containers;

allocating a memory storage area for storing a payload of said virtual container;

inputting said virtual container payload into said memory area; and

Q⁴ reading said data from said memory area in parallel with data read from other said memory areas corresponding to payloads of other said virtual containers of said plurality of virtual containers

wherein said data indicating said association includes data indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers.

Q⁴ B⁴ 26. (Amended) A method of recovering a data block carried in a plurality of payloads of a plurality of associated synchronous digital hierarchy virtual containers, said method comprising steps of:

receiving a plurality of streams of said plurality of associated virtual containers;

Q⁴ for each said received virtual container stream allocating a corresponding respective memory area for storage of data payloads of virtual containers of said stream;

Q⁴ synchronising each virtual container in the received virtual container stream with virtual containers received in other streams to remove any differential delay between virtual container streams;

storing said plurality of virtual container payloads in said corresponding allocated memory areas; and

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reading individual bytes of said plurality of stored virtual container data payloads in sequence to reconstruct said data block.

29. (Amended) Apparatus for recovering data from a plurality of synchronous digital hierarchy virtual containers containing said data, said means comprising:

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a random access memory configured into a plurality of individual memory areas allocated for storage of payloads of said plurality of virtual containers;

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a data processor means operating to identify an association data of said virtual containers, said association data indicating an association of said plurality of virtual containers; and

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means for generating a plurality of read pointers operating to successively read a plurality of memory locations of said memory areas for recovering said data from said plurality of virtual containers, wherein said association data includes data indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers.

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Please insert new claims 30 to 37 as follows:

30. (New) A method as claimed in claim 1, wherein the time at which each virtual container was generated relative to other associated virtual containers is indicated by a sequence marker incorporated in the payload of each said virtual container.

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31. (New) A method as claimed in claim 1, wherein the time at which each virtual container was generated relative to other associated virtual containers is indicated by a sequence marker incorporated in the overhead of each said virtual container.

32. (New) A method of transporting data over a synchronous digital network, said method comprising the steps of:

generating in parallel a plurality of synchronous virtual containers, each at a lower bit rate than a bit rate of said data, each said virtual container having a payload section;

associating said plurality of virtual containers with each other by means of assigning association data describing said association into said plurality of virtual containers;

indicating for each virtual container the time at which each virtual container was generated relative to other associated virtual containers;

inputting said transported data into said payloads of said plurality of virtual containers; and outputting said plurality of associated virtual containers onto a synchronous digital network,

wherein data indicating the time at which each virtual container was generated relative to other associated virtual containers is incorporated over several virtual containers by utilizing one or more bits from each successive virtual container of an association of virtual containers.

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33. ~~(New) A method as claimed in claim 32, wherein indicating the time at which each virtual container was generated relative to other associated virtual containers is incorporated over several virtual containers by utilizing one or more bits from the payload of each successive virtual container of an association of virtual containers.~~

34. (New) A method as claimed in claim 32, wherein data indicating the time at which each virtual container was generated relative to other associated virtual containers is incorporated over several virtual containers by utilizing one or more bits from the overhead each successive virtual container of an association of virtual containers.

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36 (New) A method as claimed in claim 1, wherein each association of virtual containers is identified by a path trace byte in the overhead of each of said associated virtual containers.